

Comparisons of Job Characteristics

Focus Occupation: Agricultural and Food Science Technicians (19-4011)

Associated Occupation: Agricultural Engineers (17-2021)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 34

Focus Occupation: Agricultural and Food Science Technicians (19-4011)

Associated Occupation: Agricultural Engineers (17-2021)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Engineering and Technology	5.7	23.4	4.3	<<	Extensive education and/or training may be required
Design	5.2	21.5	3.2	<<	Extensive education and/or training may be required
Mathematics	9.2	20.1	10.9	<<	Extensive education and/or training may be required
Physics	4.3	18.4	4.0	<<	Extensive education and/or training may be required
Mechanical	6.8	16.0	6.8	<<	Extensive education and/or training may be required
Computers and Electronics	8.4	14.8	8.0	<<	Extensive education and/or training may be required
Building and Construction	4.0	13.8	2.6	<<	Extensive education and/or training may be required
Production and Processing	6.0	12.2	9.1	<<	Extensive education and/or training may be required
Chemistry	4.8	12.1	10.0	<	Expanded education and/or training may be required
Food Production	2.1	11.4	9.1	<	Expanded education and/or training may be required
Biology	3.7	11.0	10.1	0	Current knowledge level may be sufficient
Law and Government	5.9	10.2	4.6	<<	Extensive education and/or training may be required
Geography	3.9	9.2	3.2	<<	Extensive education and/or training may be required
Economics and Accounting	4.4	8.3	3.0	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 89

Focus Occupation: Agricultural and Food Science Technicians (19-4011)

Associated Occupation: Agricultural Engineers (17-2021)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Critical Thinking	10.8	15.0	10.6	<<	Extensive development of skills in this area may be required
Complex Problem Solving	9.1	14.2	9.3	<<	Extensive development of skills in this area may be required
Writing	9.2	14.2	10.7	<<	Extensive development of skills in this area may be required
Judgment and Decision Making	9.4	13.2	8.7	<<	Extensive development of skills in this area may be required
Mathematics	6.2	12.0	7.9	<<	Extensive development of skills in this area may be required
Systems Analysis	6.5	11.5	6.2	<<	Extensive development of skills in this area may be required
Systems Evaluation	6.4	11.5	6.3	<<	Extensive development of skills in this area may be required
Science	4.5	9.7	7.8	<	A higher skill level may be required
Technology Design	2.6	7.9	2.1	<<	Extensive development of skills in this area may be required
Management of Material Resources	3.7	6.3	3.7	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 96

Focus Occupation: Agricultural and Food Science Technicians (19-4011)

Associated Occupation: Agricultural Engineers (17-2021)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Comprehension	11.0	15.2	11.2	<<	Extensive improvement in abilities may be required
Written Expression	9.8	14.5	11.4	<<	Extensive improvement in abilities may be required
Inductive Reasoning	10.2	14.0	10.0	<<	Extensive improvement in abilities may be required
Deductive Reasoning	10.6	13.9	10.3	<<	Extensive improvement in abilities may be required
Problem Sensitivity	11.1	13.9	10.7	<<	Extensive improvement in abilities may be required
Category Flexibility	9.0	12.2	9.5	<<	Extensive improvement in abilities may be required
Information Ordering	9.9	11.9	9.7	<	Some improvement in abilities may be required
Mathematical Reasoning	6.3	11.5	8.5	<<	Extensive improvement in abilities may be required

Number Facility	6.3	11.0	7.4	<<	Extensive improvement in abilities may be required
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The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 73

Focus Occupation: Agricultural and Food Science Technicians (19-4011)
Associated Occupation: Agricultural Engineers (17-2021)

Work Activities	Exclusivity of Activity
Analyze scientific research data or investigative findings	27
Collect scientific or technical data	30
Communicate technical information	4
Compile numerical or statistical data	38
Develop or maintain databases	30
Develop tables depicting data	33
Perform safety inspections in agricultural, forestry, or fishing setting	77
Perform statistical analysis	71
Prepare reports	8
Use biological research techniques	68
Use computers to enter, access or retrieve data	3
Use government regulations	44
Use hazardous materials information	35
Use mathematical or statistical methods to identify or analyze problems	30
Use quantitative research methods	35
Use relational database software	26
Use scientific research methodology	21
Use spreadsheet software	18
Use word processing or desktop publishing software	17
Work as a team member	36

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 85

Focus Occupation: Agricultural and Food Science Technicians (19-4011)
Associated Occupation: Agricultural Engineers (17-2021)

Tools and Technologies	Exclusivity
Computer printers	2
Computers	1

Content authoring and editing software	1
Industry specific software	1
Information exchange software	1
Network applications software	1

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.